

Supporting Information for:

White light emission from a green cyclometalated platinum(II) terpyridylphenylacetylde by titration of Zn(II) and Eu(III)

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Table S1. Crystal data and crystal structure parameters of complex **1** and **3**.

Compound	1	3
Empirical formula	C ₃₆ H ₄₅ ClN ₄ Pt	C ₅₉ H ₅₉ N ₇ Pt
Formula weight	764.30	1061.22
Temperature/ K	100(2)	100(2)
Wavelength/Å	0.71073	0.71073
Crystal system	Triclinic	Triclinic
Space group	<i>P</i> -1	<i>P</i> -1
<i>a</i> / Å	9.751(5)	10.536(8)
<i>b</i> / Å	10.049(9)	11.942(10)
<i>c</i> / Å	17.569(19)	20.816(17)
α / (°)	77.168(18)	96.159(3)
β / (°)	73.910(17)	97.366(3)
γ / (°)	85.261(2)	110.571(2)
Volume / Å ³	1612.5(2)	2398.8(3)
<i>Z</i>	2	2
<i>D</i> _c / (g·cm ⁻³)	1.574	1.469
Absorption coefficient / mm ⁻¹	4.465	2.972
<i>F</i> (000)	768	1080
Crystal size / mm	0.32×0.29×0.25	0.29×0.25×0.22
θ range for data collection / (°)	2.186 to 28.313	2.240 to 26.000
Limiting indices	-12≤ <i>h</i> ≤13, -13≤ <i>k</i> ≤12, - 23≤ <i>l</i> ≤22	-11≤ <i>h</i> ≤12, -14≤ <i>k</i> ≤14, - 25≤ <i>l</i> ≤25
Completeness to $\theta = 25.00^\circ$	99.7 %	99.7 %
Data / restraints / parameters	8000 / 15 / 381	9387 / 12 / 642
Goodness-of-fit on <i>F</i> ²	1.082	1.028
Final R indices [<i>I</i> > 2σ(<i>I</i>)] ^a	R _{int} = 0.0613	R _{int} = 0.0949
R indices (all data)	R ₁ = 0.0435, wR ₂ = 0.0803	R ₁ = 0.0488, wR ₂ = 0.0769
Largest diff. peak and hole/(e·Å ⁻³)	2.020 and -1.303	0.976 and -1.191

^a R₁ = $\sum ||F_0| - |F_c|| / \sum |F_0|$, wR₂ = $\{ \sum w[(F_0)^2 - (F_c)^2]^2 / \sum w[(F_0)^2]^2 \}^{1/2}$

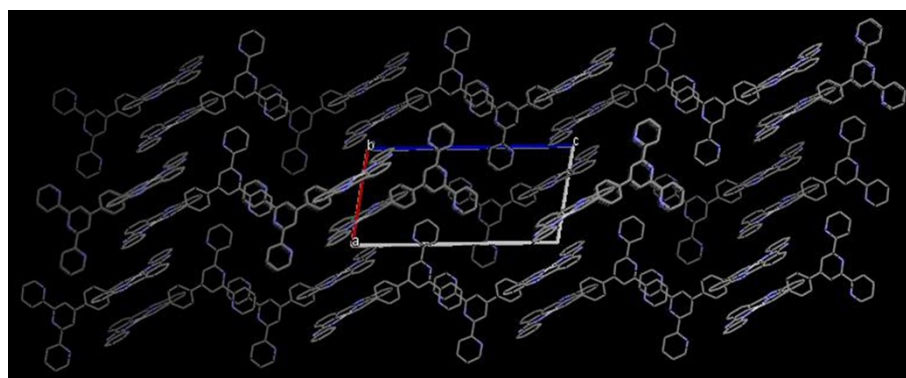
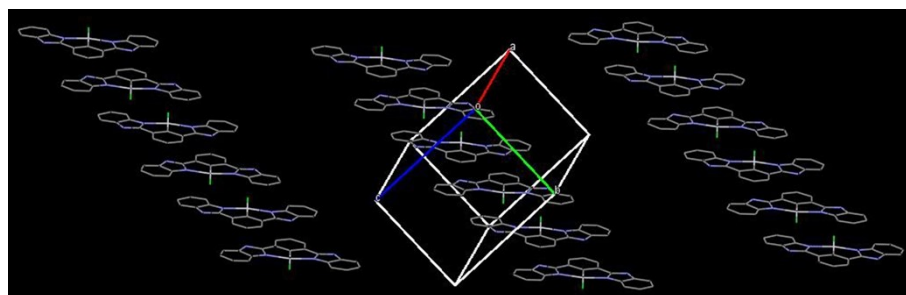


Figure S1. Crystal packing diagrams of complex **1** (top) and **3** (bottom) (hydrogen atoms and N-octyl substituents have been omitted for clarity).

Table S2. Photophysical properties of complex **1-3**.^a

Complex	$\lambda_{\text{max, abs}}$ (nm) ($\epsilon \times 10^4 \text{ dm}^3 \cdot \text{mol}^{-1} \cdot \text{cm}^{-1}$)	$\lambda_{\text{max, em}}$ (nm)	Φ_{em}^d	τ_{em}^d (μs)
1	403(1.84), 387(1.61), 354(sh, 0.73), 307(3.13)	507, 546, 590, 643(sh) (Pt) ^b	0.10	4.06
2	404(1.53), 387(1.67), 366 (1.76), 309(3.96), 298 (4.21)	508, 549, 591, 643(sh) (Pt) ^b	0.08	3.91
3	399(sh, 1.76), 379(sh, 2.74), 365 (3.30), 308 (5.60), 300 (5.69)	379, 404 (TPY); ^c 506, 547, 592, 643(sh) (Pt) ^{b,c}	0.08	3.43

^a Measured in an air-saturated CH_2Cl_2 solution at room temperature. ^b Excited wavelength is 400 nm.

^c Excited wavelength is 300 nm. ^d Absolute quantum yield and lifetime.

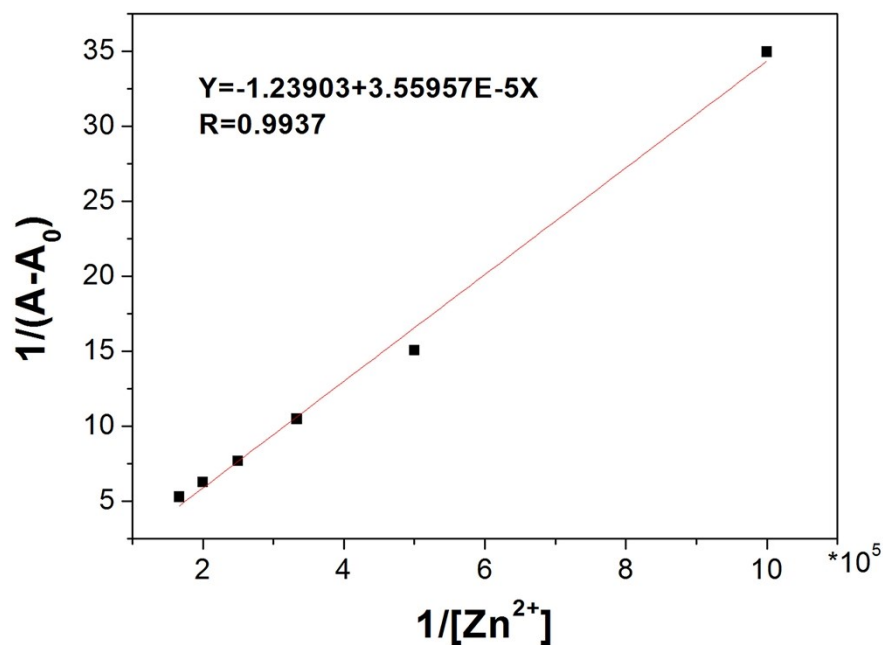


Figure S2. Benesi-Hildebrand analysis of the UV-vis absorption titration data of complex **3** in an air-saturated CH_2Cl_2 solution at room temperature.